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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,914

07/21/2003

Thomas M. Hering

27708/04065

5367

24024 7590 06/11/2007
CALFEE HALTER & GRISWOLD, LLP
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EXAMINER

DUNSTON, JENNIFER ANN

ART UNIT

PAPER NUMBER

1636

MAIL DATE

DELIVERY MODE

06/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/623,914	Applicant(s) HERING ET AL.	
	Examiner Jennifer Dunston	Art Unit 1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-14 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-13 and 36 is/are allowed.
- 6) ☒ Claim(s) 14 and 35 is/are rejected.
- 7) ☒ Claim(s) 37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Exhibits I and II</u> . |

DETAILED ACTION

This action is in response to the amendment, filed 3/20/2007, in which claims 1-7 and 15-34 were canceled, claims 8-14 were amended, and claims 35-37 were newly added. Currently, claims 8-14 and 35-37 are pending.

Applicant's arguments have been thoroughly reviewed, but are not persuasive for the reasons that follow. Any rejections and objections not reiterated in this action have been withdrawn. **This action is FINAL.**

Election/Restrictions

Applicant elected Group without traverse in the reply filed on 8/11/2006. Claims 8-14 and 35-37 are currently under consideration.

Specification

The disclosure is objected to because of the following informalities:

The specification indicates that the sequence presented in Figure 6 is disclosed in SEQ ID NO: 4 and is encoded by SEQ ID NO: 3 (e.g. paragraphs [0031 and [0056])). However, the sequence of SEQ ID NO: 3 does not encode the sequence of SEQ ID NO: 4 (see the attached alignment in Exhibit I).

Appropriate correction is required. This is a new objection, necessitated by the amendment to the sequence listing in the reply filed 3/20/2007.

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Claim Objections

Claim 14 is objected to because of the following informalities: the word “and” should be placed before item (b) in the Markush-type group to conform to the accepted language. One acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being “selected from the group consisting of A, B and C.” See *Ex parte Markush*, 1925 C.D. 126 (Comm’r Pat. 1925). Appropriate correction is required. This is a new objection, necessitated by the amendment of claim 14 in the reply filed 3/20/2007.

Claim 37 is objected to because of the following informalities: the verb does not agree with the subject. It would be remedial to amend the claim to replace the word “are” with the word “is” to improve the grammar of the claim. Appropriate correction is required. This is a new objection, necessitated by the addition of new claim 37 in the reply filed 3/20/2007.

Response to Arguments - 35 USC § 112

The rejection of claims 8-13 under 35 U.S.C. 112, second paragraph, has been withdrawn in view of Applicant’s amendment to the sequence listing in the reply filed 3/20/2007.

The rejection of claims 8-12 and 14 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, has been withdrawn in view of Applicant’s amendment to the claims in the reply filed 3/20/2007.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 14 and 35 are rejected under 35 U.S.C. 102(a) as being anticipated by GenBank Accession No. AC011508.1 (GI: 6015244, October 7, 1999; see the entire reference). This rejection was made over claim 14 in the Office action mailed 10/18/2006. The rejection has been rewritten to address amended claim 14 and has been extended to new claim 35.

Regarding claim 14, GenBank Accession No. AC011508 teaches a polynucleotide that comprises a fragment of at least 210 nucleotides in length and is identical to a sequence within nucleotides 25-1581 of SEQ ID NO: 3 (see the alignment in Exhibit II). GenBank Accession No. AC011508.1 teaches a sequence that is at least 210 nucleotides in length and is identical to a nucleotide sequence extending from nucleotide 196 through nucleotide 521 of GenBank Accession No. AC011508.1 (see the alignment in Exhibit II).

Regarding claim 35, GenBank Accession No. AC011508 teaches a polynucleotide that comprises a fragment of at least 210 nucleotides in length and is identical to a sequence within nucleotides 163-423 of SEQ ID NO: 3 (see the alignment in Exhibit II). GenBank Accession No. AC011508.1 teaches a sequence that is at least 210 nucleotides in length and is identical to a nucleotide sequence extending from nucleotide 196 through nucleotide 521 of GenBank Accession No. AC011508.1 (see the alignment in Exhibit II).

Response to Arguments - 35 USC § 102

The rejection of claims 8-10, 12 and 14 under 35 U.S.C. 102(e) as being anticipated by Brennan et al (US 5,985,551) has been withdrawn in view of Applicant's amendment to the claims in the reply filed 3/20/2007.

The rejection of claims 8-12 under 35 U.S.C. 102(a) as being anticipated by GenBank Accession No. AC011508.1 (GI: 6015244, October 7, 1999) has been withdrawn in view of Applicant's amendment to the claims in the reply filed 3/20/2007. The nucleotide sequence of GenBank Accession No. AC011508.1 does not encode a protein that is at least 90% identical to the full-length sequence of SEQ ID NO: 4 and does not contain the full-length coding sequence set forth in SEQ ID NO: 3.

With respect to the rejection of claim 14 35 U.S.C. 102(a) as being anticipated by GenBank Accession No. AC011508.1 (GI: 6015244, October 7, 1999), Applicant's arguments filed 3/20/2006 have been fully considered but they are not persuasive.

The response asserts that the amendment of claim 14 to recite that the polynucleotide is at least 210 nucleotides in length and has a sequence that is identical to or complementary to a sequence extending from nucleotide 25 through nucleotide 1581 of SEQ ID NO: 3 overcomes the rejection. This is not found persuasive, because GenBank Accession No. AC011508.1 teaches a sequence that is at least 210 nucleotides in length and is identical to a nucleotide sequence extending from nucleotide 196 through nucleotide 521 of GenBank Accession No. AC011508.1 (see the alignment in Exhibit II). This sequence is more than 210 nucleotides in length.

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For these reasons, and the reasons made of record in the previous office actions, the rejection is maintained.

Conclusion

Claims 8-13 and 36 are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Dunston whose telephone number is 571-272-2916. The examiner can normally be reached on M-F, 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Woitach can be reached on 571-272-0739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jennifer Dunston
Examiner
Art Unit 1636

/JD/

CELINE QIAN, PH.D.
PRIMARY EXAMINER



Exhibit II

**Blast 2 Sequences results**

PubMed

Entrez

BLAST

OMIM

Taxonomy

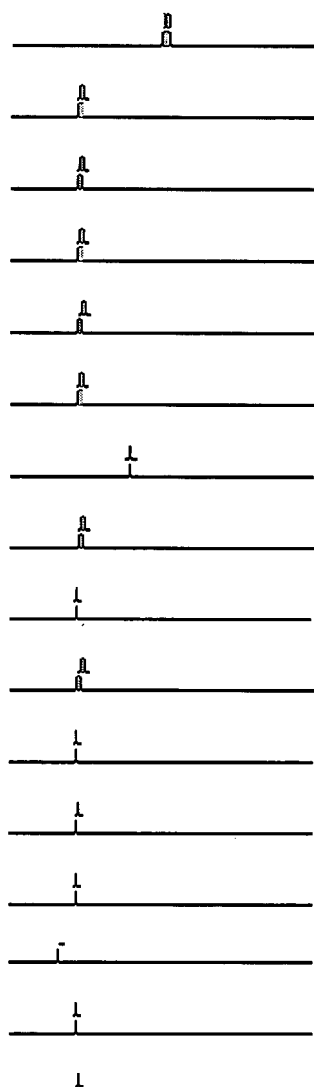
Structure

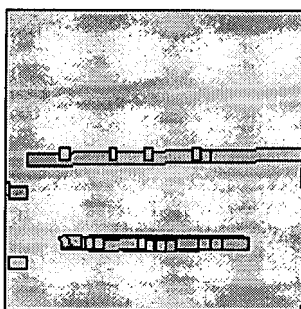
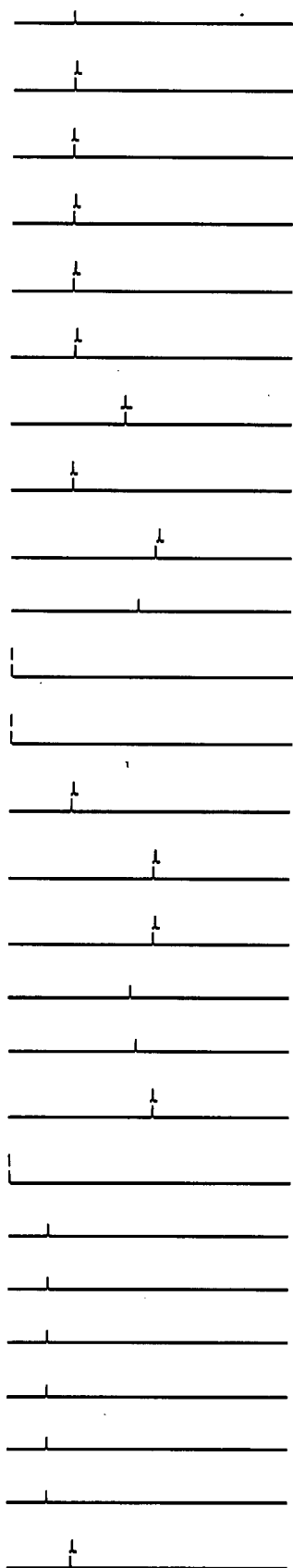
BLAST 2 SEQUENCES RESULTS VERSION BLASTN 2.2.16 [Mar-25-2007]Match: Mismatch: gap open: gap extension: x_dropoff: expect: wordsize: Filter ☐ View option Masking character option ☒ X for protein, n for nucleotide Masking color option ☐ Show CDS translation **Sequence 1:** lcl|3**SEQ ID NO:3**

Length = 2143 (1 .. 2143)

Sequence 2: gi|6015244|gb|AC011508.1|AC011508

Length = 104342 (1 .. 104342)





1

<http://www.ncbi.nlm.nih.gov/blast/bl2seq/wblast2.cgi?0>

6/5/07

NOTE: If protein translation is reversed, please repeat the search with reverse strand of the query sequence.



Score = 3698 bits (1923), Expect = 0.0
Identities = 1948/1958 (99%), Gaps = 1/1958 (0%)
Strand=Plus/Plus

Query	160	GATTTGGAGTCAAAAACGTATGAGACCAAAAAATATTTTTCAGAAAATGATATTTTGGAA	219
Sbjct	52355	GATTTGGAGTCAAAAACGTATGAGACCAAAAAATATTTTTCAGAAAATGATATTTTGGAA	52414
Query	220	ATAAATTTTCCCAGTGGGAGATGAAGGACAAAAGTAAAACCCTTGGCCTTGAGGCATCC	279
Sbjct	52415	ATAAATTTTCCCAGTGGGAGATGAAGGACAAAAGTAAAACCCTTGGCCTTGAGGCATCC	52474
Query	280	ATCTTCAGAAATAATTGGAAGTGCAAAAGCATATTCGAGGGACTAAAAGGACATCAAGAG	339
Sbjct	52475	ATCTTCAGAAATAATTGGAAGTGCAAAAGCATATTCGAGGGACTAAAAGGACATCAAGAG	52534
Query	340	GGATACTTCAGTCAAATGATAATCAGCTATGAAAAATACCTTCTTACAGAAAAAGTAAA	399
Sbjct	52535	GGATACTTCAGTCAAATGATAATCAGCTATGAAAAATACCTTCTTACAGAAAAAGTAAA	52594
Query	400	TCTCTTACTCCACATCAAAGAATTCATAATACAGAGAAATCCTATGTTTGTAAGGAATGT	459
Sbjct	52595	TCTCTTACTCCACATCAAAGAATTCATAATACAGAGAAATCCTATGTTTGTAAGGAATGT	52654
Query	460	GGGAAGGCTTGCAGTCATGGCTCAAAACTTGTTCAACATGAGAGAACTCATACAGCTGAA	519
Sbjct	52655	GGGAAGGCTTGCAGTCATGGCTCAAAACTTGTTCAACATGAGAGAACTCATACAGCTGAA	52714
Query	520	AAGCACTTTGAATGTAAAGAATGTGGGAAGAATTATTTAAGTGCCTATCAACTCAATGTG	579
Sbjct	52715	AAACACTTTGAATGTAAAGAATGTGGGAAGAATTATTTAAGTGCCTATCAACTCAATGTG	52774
Query	580	CATCAGAGATTTTCACTGGTGAGAAACCCTATGAGTGTAAGGAATGTGGGAAGACCTTT	639
Sbjct	52775	CATCAGAGATTTTCACTGGTGAGAAACCCTATGAGTGTAAGGAATGTGGGAAGACCTTT	52834
Query	640	AGCTGGGGATCAAGCCTTGTTAAACATGAGAGAAATTCACACTGGTGAGAAACCCTATGAA	699
Sbjct	52835	AGCTGGGGATCAAGCCTTGTTAAACATGAGAGAAATTCACACTGGTGAGAAACCCTATGAA	52894
Query	700	TGTAAAGAATGTGGGAAGGCCTTTAGTCGTGGCTATCACCTTACCCAACATCAGAAAATT	759
Sbjct	52895	TGTAAAGAATGTGGGAAGGCCTTTAGTCGTGGCTATCACCTTACCCAACATCAGAAAATT	52954
Query	760	CATATTGGTGTGAAATCTTATAAATGTAAGGAATGTGGGAAGGCCTTTTTTTGGGGCTCA	819
Sbjct	52955	CATACTGGTGTGAAATCTTATAAATGTAAGGAATGTGGGAAGGCCTTTTTTTGGGGCTCA	53014
Query	820	AGCCTTGCTAAACATGAGATAATTCATACAGGTGAGAAACCTTATAAATGTAAAGAATGT	879
Sbjct	53015	AGCCTTGCTAAACATGAGATAATTCATACAGGTGAGAAACCTTATAAATGTAAAGAATGT	53074

Query	880	GGGAAGGCCCTTCAGTCGTGGCTATCAACTTACTCAGCATCAGAAAATCCATACTGGTAAG	939
Sbjct	53075	GGGAAGGCCCTTCAGTCGTGGCTATCAGCTTACTCAGCATCAGAAAATCCATACTGGTAAG	53134
Query	940	AAACCTTATGAATGTAAATATGTGGAAAGGCTTTTTGTTGGGGCTATCAACTTACTCGA	999
Sbjct	53135	AAACCTTATGAATGTAAATATGTGGAAAGGCTTTTTGTTGGGGCTATCAACTTACTCGA	53194
Query	1000	CATCAGATATTTTCACTGGTGAGAAACCCATGAATGCAAGGAATGTGGGAAGGCTTTT	1059
Sbjct	53195	CATCAGATATTTTCACTGGTGAGAAACCCATGAATGCAAGGAATGTGGGAAGGCTTTT	53254
Query	1060	AATTGCGGATCAAGTCTTATTCAACATGAAAGAATTCATACTGGTGAGAAACCTTATGAA	1119
Sbjct	53255	AATTGCGGATCAAGTCTTATTCAACATGAAAGAATTCATACTGGTGAGAAACCTTATGAA	53314
Query	1120	TGTAAAGAATGTGGAAAGGCCTTTAGTCGTGGCTATCACCTTCTCAACATCAGAAAATC	1179
Sbjct	53315	TGTAAAGAATGTGGAAAGGCCTTTAGTCGTGGCTATCACCTTCTCAACATCAGAAAATC	53374
Query	1180	CATACTGGTGAGAAACCTTTTGAATGTAAGGAATGTGGGAAGGCCTTTAGTTGGGGTTCA	1239
Sbjct	53375	CATACTGGTGAGAAACCTTTTGAATGTAAGGAATGTGGGAAGGCCTTTAGTTGGGGTTCA	53434
Query	1240	AGCCTTGTTAAACATGAGAGAGTTCATACTGGTGAGAAATCCCATGAATGTAAAGAATGC	1299
Sbjct	53435	AGCCTTGTTAAACATGAGAGAGTTCATACTGGTGAGAAATCCCATGAATGTAAAGAATGC	53494
Query	1300	GGAAAGACCTTTTGTAGTGGGTATCAACTTACTCGACATCAGGTATTTTCACTGGTGAG	1359
Sbjct	53495	GGAAAGACCTTTTGTAGTGGGTATCAACTTACTCGACATCAGGTATTTTCACTGGTGAG	53554
Query	1360	AAACCCTATGAATGTAAGGAATGTGGGAAGGCTTTTAATTGTGGATCAAGCCTTGTTCAA	1419
Sbjct	53555	AAACCCTATGAATGTAAGGAATGTGGGAAGGCTTTTAATTGTGGATCAAGCCTTGTTCAA	53614
Query	1420	CATGAAAGAATCCATACAGGGGAGAAACCCATGAATGTAAAGAATGT-GGAAGGCTTTT	1478
Sbjct	53615	CATGAAAGAATCCATACAGGGGAGAAACCCATGAATGTAAAGAATGTGGGAAGGCTTTT	53674
Query	1479	AGTCGTGGCTATCACCTTACTCAACATCAGAAAATTCATACCGGTGAGAAACCTTTCAA	1538
Sbjct	53675	AGTCGTGGCTATCACCTTACTCAACATCAGAAAATTCATACCGGTGAGAAACCTTTCAA	53734
Query	1539	TGTAAGGAATGTGGGAAGGCCTTCAGTTGGGGTTCAAGCCTAGTTAAGCATGAGAGAGTC	1598
Sbjct	53735	TGTAAGGAATGTGGGAAGGCCTTCAGTTGGGGTTCAAGCCTAGTTAAGCATGAGAGAGTC	53794
Query	1599	CATACTAATGAGAAGTCTTATGAATGTAAAGACTGTGGGAAGGCCTTTGGTAGTGGCTAT	1658
Sbjct	53795	CATACTAATGAGAAGTCTTATGAATGTAAAGACTGTGGGAAGGCCTTTGGTAGTGGCTAT	53854
Query	1659	CAACTTAGTGTTTCATCAGAGATTTTCACTGGTGAGAAGCTTTATCAACATAAGGAATTC	1718
Sbjct	53855	CAACTTAGTGTTTCATCAGAGATTTTCACTGGTGAGAAGCTTTATCAACATAAGGAATTC	53914
Query	1719	GGGAAGACCTTTACTCGTGGCTCAAAACTTGTTTCATGAGAGAACTCATAGTAATGATAAA	1778
Sbjct	53915	GGGAAGACCTTTACTTGTGGCTCAAAACTTGTTTCATGAGAGAACTCATAGTAATGATAAA	53974

Query 1779 CCCTACAAATATAACGAATGTGGGGAAGCCTTTCTGTGGACAACCTTACTCAAATGAGAAA 1838
|||||
Sbjct 53975 CCCTACAAATATAACGAATGTGGGGAAGCCTTTCTGTGGACAACCTTACTCAAATGAGAAA 54034

Query 1839 ATTGATACTGATGAAACCTTATGATTGAAAGTTGTAAAAGAATATTTTGTGTGTGCGTAT 1898
|||||
Sbjct 54035 ATTGATACTGATGAAACCTTATGATTGAAAGTTGTAAAAGAATATTTTGTGTGTGTGTAT 54094

Query 1899 AGACAACCTTATCATAATAAGAACTCTTACTCTTGAGAAACCTTGTGAATGTAAGGGTTGT 1958
|||||
Sbjct 54095 AGACAACCTTATCATAATAAGAACTCTTACTCTTGAGAAACCTTGTGAATGTAAGGGTTGT 54154

Query 1959 GCAAAAAGCCATTCATTTCTGTTTATGGGCAATTATCTTGCTATCCAGCAATTCATACTAG 2018
|||||
Sbjct 54155 GCAAAAAGCCATTCATTTCTGTTTATGGGCAATTATCTTGCTATCCAGCAATTCATACTAG 54214

Query 2019 TGAGAAATATTTTGAATATAATTAATATGAAAAGGCCTTTAGACTTCTGTACAGTCTTAT 2078
|||||
Sbjct 54215 TGAGAAATATTTTGAATATAATTAATATGAAAAGGCCTTTAGACTTCTGTACAGTCTTAT 54274

Query 2079 TGGATATCAATTTATACTGATGTAAAATCATTTAAATG 2116
|||||
Sbjct 54275 TGGATATCAATTTATACTGATGTAAAATCATTTAAATG 54312

||
||

Score = 406 bits (211), Expect = 2e-109
Identities = 618/819 (75%), Gaps = 1/819 (0%)
Strand=Plus/Plus

Query 748 CATCAGAAAATTCATATTGGTGTGAAATCTTATAAATGTAAGGAATGTGGGAAGGCCTTT 807
|||||
Sbjct 23822 CATCAGAAAATTCATCATGGTGTGAAACCTACAAATGTAAAGAATGTGGAAAGGCCTTT 23881

Query 808 TTTTGGGGCTCAAGCCTTGCTAAACATGAGATAATTCATACAGGTGAGAAACCTTATAAA 867
| | | | |
Sbjct 23882 GGTCAATCGTTCAAGTCTTTACCAACATAAGAAAATTCATTCTGGTGAGAAACCATATAAA 23941

Query 868 TGTAAAGAATGTGGGAAGGCCTTCAGTCGTGGCTATCAACTTACTCAGCATCAGAAAATC 927
| | | | |
Sbjct 23942 TGTGAACAATGTGAAAGGCCTTTGTTTCGAGCTATCTACTTGTGTAACATCAAAGAAGT 24001

Query 928 CATACTGGTAAGAAACCTTATGAATGTAAAATATGTGGAAAGGCCTTTTGTGGGGCTAT 987
| | | | |
Sbjct 24002 CATACTGGTGAGAAACCTCATGAATGCATGGAATGTGGAAAGGCCTTTTGGTAAGGGCTCA 24061

Query 988 CAACTTACTCGACATCAGATATTTTCACTGGTGAGAAACCTTATGAATGCAAGGAATGT 1047
| | | | |
Sbjct 24062 AGCCTTCTTAAACATAAGAGAATTCATAGTAGTGAGAACTCTATGATTGTAAGGATTGT 24121

Query 1048 GGAAGGCCTTTTAAATTGCGGATCAAGTCTTATTCAACATGAAAGAATTCATACTGGTGAG 1107
| | | | |
Sbjct 24122 GGAAAGGCCTTTTGTAGAGGCTCTCAACTTACACAGCATCAGAGAATTCATACTGGTGAG 24181

Query 1108 AAACCTTATGAATGTAAAGAATGTGGAAAGGCCTTTAGTCGTGGCTATCACCTTTCTCAA 1167

Exhibit I



Blast 2 Sequences results

PubMed

Entrez

BLAST

OMIM

Taxonomy

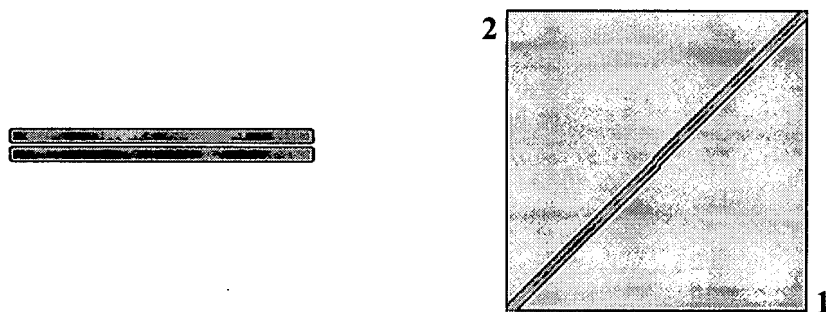
Structure

BLAST 2 SEQUENCES RESULTS VERSION BLASTP 2.2.16 [Mar-25-2007]

Matrix **BLOSUM62** gap open: **11** gap extension: **1**
 x_dropoff: **0** expect: **10.0000** wordsize: **3** Filter ☐ View option **Standard**
 Masking character option **X for protein, n for nucleotide** Masking color option **Black**
☐ Show CDS translation **Align**

Sequence 1: lcl|SID3_ORF Protein encoded by SEQ ID NO:3.
 Length = 517 (1 .. 517)

Sequence 2: lcl|SID4 Protein of SEQ ID NO:4.
 Length = 518 (1 .. 518)



NOTE: Bitscore and expect value are calculated based on the size of the nr database.



Score = 957 bits (2475), Expect = 0.0, Method: Composition-based stats.
 Identities = 516/517 (99%), Positives = 516/517 (99%), Gaps = 0/517 (0%)

Query	1	MTDGLVTFRDVAIDFSQEEWECLDPAQRDLYVDVMLENYSNLVSLDLESKTYETKKYFSE	60
		MTDGLVTFRDVAIDFSQEEWECLDPAQRDLYVDVMLENYSNLVSLDLESKTYETKK FSE	
Sbjct	1	MTDGLVTFRDVAIDFSQEEWECLDPAQRDLYVDVMLENYSNLVSLDLESKTYETKKIFSE	60
Query	61	NDIFEINF SQWEMKDKSKTLGLEASIFRNNWKCKSIFEGLKGHQEGYFSQMIISYEKIPS	120
		NDIFEINF SQWEMKDKSKTLGLEASIFRNNWKCKSIFEGLKGHQEGYFSQMIISYEKIPS	
Sbjct	61	NDIFEINF SQWEMKDKSKTLGLEASIFRNNWKCKSIFEGLKGHQEGYFSQMIISYEKIPS	120
Query	121	YRKSLSLTPHQRIHNTEKSYVCKEKGKACSHGSKLVQHERHTAEKHFECKEKGKNYLSA	180
		YRKSLSLTPHQRIHNTEKSYVCKEKGKACSHGSKLVQHERHTAEKHFECKEKGKNYLSA	
Sbjct	121	YRKSLSLTPHQRIHNTEKSYVCKEKGKACSHGSKLVQHERHTAEKHFECKEKGKNYLSA	180
Query	181	YQLNVHQRFHTGEKPYECKEKGKTFWGSSLVKHERIHTGEKPYECKEKGKAFSRGYHLT	240
		YQLNVHQRFHTGEKPYECKEKGKTFWGSSLVKHERIHTGEKPYECKEKGKAFSRGYHLT	
Sbjct	181	YQLNVHQRFHTGEKPYECKEKGKTFWGSSLVKHERIHTGEKPYECKEKGKAFSRGYHLT	240

Query	241	QHQQIHIGVKSYSKCECGKAFFWGSSSLAKHEIIHTGEKPYKCECGKAFSRGYQLTQHQQ	300
Sbjct	241	QHQQIHIGVKSYSKCECGKAFFWGSSSLAKHEIIHTGEKPYKCECGKAFSRGYQLTQHQQ	300
Query	301	IHTGKKPYECKICGKAFCWGYQLTRHQIFHTGEKPYECKECGKAFNCGSSLIQHERIHTG	360
Sbjct	301	IHTGKKPYECKICGKAFCWGYQLTRHQIFHTGEKPYECKECGKAFNCGSSLIQHERIHTG	360
Query	361	EKPYECKECGKAFSRGYHLSQHQQIHTGEKPFECKECGKAFSWGSSSLVKHERVHTGEKSH	420
Sbjct	361	EKPYECKECGKAFSRGYHLSQHQQIHTGEKPFECKECGKAFSWGSSSLVKHERVHTGEKSH	420
Query	421	ECKECGKTFCSGYQLTRHQVFHTGEKPYECKECGKAFNCGSSSLVQHERIHTGEKPYECKE	480
Sbjct	421	ECKECGKTFCSGYQLTRHQVFHTGEKPYECKECGKAFNCGSSSLVQHERIHTGEKPYECKE	480
Query	481	CGRLLVVAITLLNIRKFIPVRNLSNVRNVGRPSVGVQ	517
Sbjct	481	CGRLLVVAITLLNIRKFIPVRNLSNVRNVGRPSVGVQ	517

CPU time: 0.02 user secs. 0.01 sys. secs 0.03 total secs.